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EXAMINER

CADUGAN, ERICA E

ART UNIT	PAPER NUMBER
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3722

DATE MAILED: 07/03/2003

21

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/147,398

Applicant(s)

KAULE ET AL.

Examiner

Erica E Cadugan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-18,20-22,24,28-33,36-38,40,42 and 43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 and 30-33 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-18,20-22,28,29,36-38,40,42 and 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 26. 6) ☐ Other: _____

DETAILED ACTION

Faxing of Responses to Office Actions

1. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302 or, for responses after final rejection only, to (703) 872-9303. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the examiner.

Claim Rejections - 35 USC § 112

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-2, 4-18, 20-22, 28-29, 36-38, 40, and 42-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are positively recited limitations that lack sufficient antecedent bases in the claims. Examples of this are: "the embossing plate" in claim 18; "the embossing plate" in claim 36; "the spacing" in claim 38; "said limited partial area" in claim 40, line 2 (plural "limited partial areas" previously set forth); "said tool track in said second limited partial area" in claim 40; "the spacing" in claim 40, penultimate line; "said additional information" in claim 42.

In claim 38, it is unclear as set forth in the claim between what structures the spacing is located, i.e., between "said tool track" and what other structure?

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It is unclear in claim 42, via the lack of a modifying article, whether “multiple depressions” is meant to be a subset of the previously set forth “at least one depression”. If so, Examiner suggests changing “multiple depressions” to language such as --multiple ones of the depressions--.

In claim 1, the relationship of the “at least one depression” to the rest of the claim is unclear, i.e., it is unclear as set forth in the claim whether the depression(s) comprise(s) the “limited partial area” whose material is removed. Examiner suggests changing “the surface” in line 4 to --the at least one depression--.

Claim Rejections - 35 USC § 102/103

4. Claims 1-2, 4, 6, 14, 16-17, and 37, as best understood, are rejected under 35 U.S.C. 102(b) as anticipated by U.S. Pat. No. 5,246,319 (Prince et al). Alternatively, claims 1-2, 4-6, 14, 16-17, and 37, as best understood, are rejected under 35 USC 103(a) as being obvious over either of U.S. Pat. No. 2,210,923 (Jacquerod et al.) or the Technical Manual from Lang GmbH & Co. Kg, cited by Applicant on the IDS submitted March 24, 2003 (hereinafter “Lang”) in view of Prince et al.

Prince et al. teaches a cutting method wherein a tool (shown in Figure 1a with conical tip portion 103) is numerically controlled to produce a “depression” in the form of a “line”, for example, the generally vertical portion of the “F” shown in Figures 1a and 1b. Note that Prince et al. specifically teaches that the method can be used to produce “letters” (col. 1, lines 64-68), and that the letter “O”, for example, is a closed shape and particularly has the claimed “limited partial area”. The numerical controller is used to “calculate” tool track data (col. 2, lines 1-38, for example) to move the tool so as to produce the desired “depression”. Note that the controller

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takes into account the tool depth (col. 2, lines 25-28, also col. 4, lines 30-32, for example). Note also that in the instance where an "O" is formed, the tool would not need to be lifted to produce different strokes such as the generally horizontal portions of the "F", and would thus have a "continuous" tool track. Also note that the tool track for the generally vertical portion of the "F" is "continuous" (Figures 1a-1b, for example). Also note that Prince specifically describes carving a letter "P" wherein the rounded part is made with a first path and the linear part is made with a second path, and note that each one of these portions of the letter P is "continuous" (col. 4, lines 44-53).

Regarding claim 2, note that the center of the tool track, i.e., the portion created by the tip 103, extends "contour-parallel" to the "desired contour" (Figures 1a-1b, for example).

Regarding claim 4, note that Prince specifically teaches varying the depth of cut (col. 3, lines 22-25).

Regarding claim 6, note that only "one traverse" of the tool is used in producing the vertical leg of the "F" (column 2, Figure 1a, for example).

Regarding claim 17, Prince teaches that it is known to use rotating tools (e.g., in a router, col. 1, lines 15-30).

Regarding claim 37, note that the tool track "takes into account" the tool width (col. 5, lines 6-41, for example).

Note that as there is nothing preventing the "depressions" taught by Prince from being filled with printing ink, the engraved workpiece taught by Prince is considered to be an "intaglio printing plate".

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Alternatively, Jacqueroed et al. teaches an intaglio printing plate 10 (page 2, left column, lines 38-42 and Figure 1) which has a depression 11 in the shape of a "one" which constitutes a line, which depression is shown in Figures 1-3 as having flanks and a bottom. The depression 11, 11', is produced via an "incision" (page 2, left col., lines 39-40 for example), and thus is produced via an "engraving tool". However, Jacqueroed is silent about the tool and method used for incising or "engraving" this depression.

Alternatively, Lang teaches a "graphical design program for engravers and milling machines", and describes the "fully automated production of a press plate" as described by Applicant in the "Concise Statement of Relevancy" submitted March 24, 2003. However, Lang appears not to show the details of the tool track. Lang does not appear to teach the material of the plate.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the method taught by Prince et al. and described above to have incised the plates of either Jacqueroed or Lang for the purpose of taking a "craft and turning it into a technology" as taught by Prince et al. (col. 5, lines 66-68), i.e., increasing accuracy, speed, and repeatability of the engraving process.

Claim Rejections - 35 USC § 103

5. Claim 36, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,246,319 (Prince et al.) as applied to claim 1 above.

Prince et al. teaches all aspects of the claimed invention as described in the above rejection based thereon, and further teaches that the worked material can be a variety of

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materials, including “metal” (col. 5, lines 57-60), but does not specifically teach that the metal is “steel”.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used whatever known material, such as steel, as was desired or expedient, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. See also Ballas Liquidating Co. v. Allied industries of Kansas, Inc. (DC Kans) 205 USPQ 331.

6. Claims 1-2, 5-11, 14, 16-18, 20, 36, and 37, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over either of U.S. Pat. No. 2,210,923 (Jacquerod et al.) or the Technical Manual from Lang GmbH & Co. Kg, cited by Applicant on the IDS submitted March 24, 2003 (hereinafter “Lang”) in view of U.S. Patent No. 4,949,270 (Shima et al.).

Jacquerod et al. teaches an intaglio printing plate 10 (page 2, left column, lines 38-42 and Figure 1) which has a depression 11 in the shape of a “one” which constitutes a line, which depression is shown in Figures 1-3 as having flanks and a bottom. The depression 11, 11', is produced via an “incision” (page 2, left col., lines 39-40 for example), and thus is produced via an “engraving tool”. However, Jacquerod is silent about the tool and method used for incising or “engraving” this depression. Jacquerod is also silent as to the material of the plate.

Alternatively, Lang teaches a “graphical design program for engravers and milling machines”, and describes the “fully automated production of a press plate” as described by Applicant in the “Concise Statement of Relevancy” submitted March 24, 2003. However, Lang

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appears not to show the details of the tool track. Lang does not appear to teach the material of the plate.

Shima et al. teaches a device for and method of machining a pocket of a desired contour into a surface (column 1, lines 58-68, and column 2, lines 1-4), which constitutes a similar problem solving area to the instant invention. Shima teaches performing such machining at a predetermined depth of cut (column 1, lines 13-15). Shima teaches the use of a tool path 4 that is “intersection-free” as well as at least partially “contour-parallel” to the desired contour 1 (see Figure 16), and which tool path only requires one traverse of the tool (see Figure 16). Shima also teaches that it is known to use a tool path that removes residual area with a second tool track (Figure 13c) which removes material in tracks which are “contour-parallel” to the desired contour (Figure 13c). Alternatively, any time the tool “turns”, it could be said to create a new tool path (i.e., the second tool track as claimed in claim 7). For example, in Figure 13b, the tool path starts at the top going from right to left, which could constitute a first track, and then it proceeds to turn and move from top to bottom, which could constitute a second tool track.

Shima also teaches that it is known to use a “meander” shaped tool path (see Figure 13b).

Specifically regarding claims 10 and 11, when material is removed, a new surface having a roughness will be formed, and when the material is removed via a tool having any of the paths taught by Shima, the new surface will have grooves of one size or another. Specifically regarding claim 14, the desired contour is defined with the aid of a data processing system (column 2, lines 30-46). Specifically regarding claim 18, tools of different kinds or dimensions are used, or it would not be necessary to define the tool shape and diameter as described in

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column 3, lines 49-52. Note that as the tool diameter is being defined, the tool “width” is being “taken into account”.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the method of taught by Shima et al. to machine the desired contour into the printing plate taught by either Jacquerod et al. or Lang for the purpose of using a cutting method that has a “high cutting efficiency” and that is simple to use (col. 1, lines 58-61 of Shima et al., for example).

Specifically regarding the multiple tools of claim 20, while Jacquerod and Lang do not specify that multiple tools are used, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized multiple tools, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Regarding the rotating tool, pocket machining or “end face finishing” (Shima et al., column 3, lines 25-30) requires a rotating tool in order to produce the quality of finish that characterizes a “finishing” operation.

Specifically regarding claim 36, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used whatever known material, such as steel, as was desired or expedient for the plate taught by Jacquerod or Lang, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v. Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

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7. Claims 15 and 43, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Jacquerod et al. or Lang in view of U.S. Patent No. 4,949,270 (Shima et al.) as applied to claim 1 above, and further in view of U.S. Patent No. 4,972,323 (Cauwet).

The combination of Jacquerod or Lang with Shima et al. teaches the aspects of the claimed invention as set forth in the above rejection based thereon, but does not teach using a laser engraving tool.

Cauwet teaches the use of an engraving tool having three axes of movement (column 1, lines 22-25) to vary the depth of cut (column 14, lines 3-17) and to set multiple tooling passes (“one or more further engraving steps” as claimed in claim 12) (see column 14, lines 34-36) in a flat plate workpiece (column 2, lines 5-6). Cauwet also teaches that the engraving tool can be a milling cutter or laser, with the specific type of engraving tool used being dependent on the material of workpiece used (column 2, lines 50-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized whatever type of engraving tool was desired depending on the workpiece material type, and particularly to have used a laser engraving tool, as taught by Cauwet, to incise or “engrave” the workpiece taught by either of Jacquerod or Lang with the engraving method taught by Shima et al, for the purpose of being able to engrave workpieces made of materials that are not suitable for engraving with a rotary engraver (Cauwet, column 2, lines 50-55).

8. Claims 1-2, 5-14, 16-18, 20-21, 36-38, and 40, as best understood, rejected under 35 U.S.C. 103(a) as being unpatentable over either of Jacquerod et al. or Lang in view of U.S. Patent No. 4,907,164 (Guyder).

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Jacquero et al. teaches an intaglio printing plate 10 (page 2, left column, lines 38-42 and Figure 1) which has a depression 11 in the shape of a "one" which constitutes a line, which depression is shown in Figures 1-3 as having flanks and a bottom. The depression 11, 11', is produced via an "incision" (page 2, left col., lines 39-40 for example), and thus is produced via an "engraving tool". However, Jacquero is silent about the tool and method used for incising or "engraving" this depression. Jacquero is also silent as to the material of the plate.

Alternatively, Lang teaches a "graphical design program for engravers and milling machines", and describes the "fully automated production of a press plate" as described by Applicant in the "Concise Statement of Relevancy" submitted March 24, 2003. However, Lang appears not to show the details of the tool track. Lang does not appear to teach the material of the plate.

Guyder teaches a method for creating a tool paths for, and subsequently machining, a cavity (col. 2, lines 1-6) "with the aid of a computer program" (col. 4, lines 24-33, for example). The depth of cut for each set of tool paths is constant, i.e., "the z depth is set and all tool motion is in the x and y planes, another z depth is set and so on" such that "for any one set of tool paths, z is constant (col. 1, lines 10-15). Note, for example, that Guyder teaches various tool paths 113-115, any one of which is "continuous" and defines a "limited partial area" or "desired contour" of a "depression" (see Figures 4-5, for example). Note also that various ones of the tool paths 113-115 extend "contour-parallel to the desired contour" (Figures 4-5). Note that each tool path is performed by a "single working traverse" of the tool (Figures 4-5, for example).

Regarding claim 7, for example, note that some of the tracks are "located within" other tracks (Figures 4-5).

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Regarding claim 9, note that various ones of the tool paths “meander” (Figures 4-5).

Regarding claim 10, note that the engraving inherently produces a new surface with a “defined roughness” at the base of the engraving, i.e., there is a new surface left behind when the material is removed, which surface, as do all surfaces, has a “roughness”, and thus a “defined roughness”. Note that moving the tool as shown in Figures 4-5 will inherently produce “grooved” roughnesses.

Specifically regarding claim 13, note that the “information”, such as the shape, of the engraved area is “humanly recognizable” or “machine-readable” in that it is “able to be humanly recognized”, e.g., by viewing, and “able to be read by a machine”, e.g., by scanning with a scanner.

Regarding claims 16-17, note that the milling tool described by Guyder is considered a rotating “mechanical chisel”.

Regarding claim 21, note that the user must define the tool radius (col. 1, lines 60-68), and thus Guyder provides for the use of tools with varying radii. Also note that the tool “width” is thus “taken into account” (re claim 37).

Regarding claim 18, note that Guyder teaches different types of tools (col. 2, lines 29-35).

Regarding claim 38, note that Guyder teaches specifying the distance between tool paths (col. 1, lines 63-65).

Regarding claim 40, note that any of the inner tool paths can be considered the “second desired contour” (Figures 4-5), and that Guyder teaches producing tool paths at multiple z depths. Thus, an inner tool path at a deep z depth can specifically be considered the “second desired contour”. Regarding the roughness structures as claimed, again note that removing

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material will inherently create a surface with a particular roughness, and that Guyder teaches selecting the spacing between tool paths as described above.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the method taught by Guyder to determine tool paths and subsequently machine (as taught by Guyder) or “engrave” the depression taught by either of Jacquerod or Lang for the purpose of providing a fast, cheap, and flexible automated method of removing the material (col. 1, lines 7-11 of Guyder for example).

Specifically regarding the multiple tools of claim 20, while Jacquerod and Lang do not specify that multiple tools are used, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized multiple tools, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Specifically regarding claim 36, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used whatever known material, such as steel, as was desired or expedient for the plate taught by Jacquerod or Lang, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v. Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331.

9. Claims 15 and 43, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over either of Jacquerod et al. or Lang in view of U.S. Patent No. 4,907,164

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(Guyder) as applied to claim 1 above, and further in view of U.S. Patent No. 4,972,323 (Cauwet).

The combination of Jacquerod or Lang with Guyder teaches the aspects of the claimed invention as set forth in the above rejection based thereon, but does not teach using a laser engraving tool.

Cauwet teaches the use of an engraving tool having three axes of movement (column 1, lines 22-25) to vary the depth of cut (column 14, lines 3-17) and to set multiple tooling passes (“one or more further engraving steps” as claimed in claim 12) (see column 14, lines 34-36) in a flat plate workpiece (column 2, lines 5-6). Cauwet also teaches that the engraving tool can be a milling cutter or laser, with the specific type of engraving tool used being dependent on the material of workpiece used (column 2, lines 50-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized whatever type of engraving tool was desired depending on the workpiece material type, and particularly to have used a laser engraving tool, as taught by Cauwet, to incise or “engrave” the workpiece taught by either of Jacquerod or Lang with the engraving method taught by Shima et al, for the purpose of being able to engrave workpieces made of materials that are not suitable for engraving with a rotary engraver (Cauwet, column 2, lines 50-55).

Allowable Subject Matter

10. Claims 24 and 30-33 are allowed.

11. Claims 22 and 28-29 and 42 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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12. The following is a statement of reasons for allowance of claims 24 and 30-33: U.S. Pat. No. 2,210,923 (Jacquerod et al.) is representative of the closest prior art of record to independent claim 24. Jacquerod teaches an intaglio printing plate with at least one “engraved” or incised depression in the form of a line (for example, the incised shape of the 1 labeled with reference numeral 11 in Figure 1, see also page 2, lines 38-42, for example). This depression has flanks and a bottom (see Figures 1-3). This depression also has defined roughness structures 11a at the bottom of the depression. However, Jacquerod teaches two different ways that roughness structures may be supplied to the depression 11. Firstly, Jacquerod teaches that roughness structures may be mechanically cross-hatched (page 1, left column, lines 9-24). Also, Jacquerod teaches that these roughness structures may be formed by acid etching (page 2, left column, lines 19-37, for example). It is noted that the acid-etched roughness structures 11a are the ones shown in Figures 1-3. Independent claim 24 sets forth that the defined roughness structure “has a predetermined meander-shape or extends at least in partial areas in a predetermined direction parallel to a direction of said at least one line”. It is noted that in the case of the acid-etched stiples or “roughness structure”, the pattern is not “predetermined” as claimed, but random. It is further noted that in the case of the mechanically cross-hatched “roughness structure”, there is no specific teaching as to the orientation of the cross-hatchings with respect to the direction of the depression, and thus Jacquerod does not teach that the mechanically cross-hatched “roughness structure” “has a predetermined meander-shape or extends in at least partial areas in a predetermined direction parallel to a direction of said at least one line”. For at least these reasons, Jacquerod does not anticipate the present invention as set forth in independent claim 24. Additionally, as there is no combinable teaching in the prior art of record that would motivate

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one of ordinary skill in the art to so modify Jacquerod, Jacquerod does not render obvious the present invention as set forth in the independent claim 24.

Additionally, regarding the Graboyes reference previously applied against independent claim 24 (U.S. Re. 28747), Applicant's remarks in the two paragraphs at the bottom of page 3 (which the second paragraph also extends to page 4) beginning "[a]s pointed out in a previous response" and "[a]ccording to the teachings of Graboyes..." are persuasive.

Response to Arguments

13. Applicant's arguments filed March 24, 2003 have been fully considered but they are not persuasive. Many of Applicant's arguments are moot in view of the new ground(s) of rejection, and accordingly, applicant's attention is directed to the above rejections. However, Examiner will address those arguments which still pertain.

Applicant has asserted that "the Shima patent teaches displaying the profile outline or contour on a display screen of a computer (Col. 1, lines 62-65; Col. 2, lines 45-46), successively positioning a cursor so as to enable its coordinates to be input at selected points on the display screen, and then calculating the tool path using the manually predetermined coordinates in order to hollow out the interior of the profile or contour displayed on the screen". However, it is unclear what portion of the claim language Applicant is indicating would preclude Shima's method from applying to the claims. Note that no specifics of how (emphasis added) the limited partial area is "defined" or the tool track "calculated" are set forth in independent claim 1, other than that the calculating occurs "with aid of a computer program". By Applicants' own statement quoted above, the tool paths are being calculated with a cursor on a computer, i.e., with "aid of a computer program" as claimed. Although the claims are interpreted in light of the

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specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant further asserts that Shima “does not first define a desired contour on the plate by using a tool to produce the at least one depression, the line defining a partial area, and an edge of the partial area defining a desired contour, and then controlling the movement of the engraving tool so that material of the partial area is removed within the desired contour”.

However, this is not persuasive. As described in the above rejection, Shima teaches defining tool paths. Note that these tool paths “define” a desired contour, as well as a “limited partial area” as set forth in the claim. (It is also noted that the claims do not set forth that the contour is defined by “using a tool” or that the “line” defines the partial area. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).)

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The newly-cited prior art teaches various machining methods that are similar to the present invention.

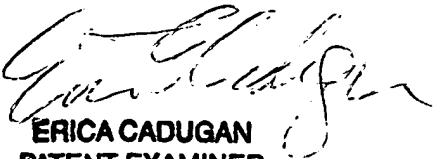
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica E Cadugan whose telephone number is (703) 308-6395. The examiner can normally be reached on M-F, 7:30 a.m. to 5:00 p.m., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (703) 308-2159. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.



ERICA CADUGAN
PATENT EXAMINER

eec
June 27, 2003